

BABESIOSIS

What is babesiosis?

Babesiosis is infection of red blood cells by a parasite called *Babesia*. Patients with babesiosis have an illness with fever, chills, muscle pain, and fatigue. To date, over 300 human cases have occurred nationwide. Nearly all of these cases have been in the northeastern United States (U.S.) and have been due to a kind of *Babesia* called *Babesia microti*. Cases of babesiosis caused by *B. microti* in California have been diagnosed in people returning from the northeastern U.S. Additionally, six cases of babesiosis have occurred in California since 1993 caused by a different *Babesia*, currently called WA1.

How do you get babesiosis?

People get infected with the *Babesia* parasite when a tick infected with *Babesia* bites them. An infected tick must be attached and feeding for at least 24 hours before it can transmit the organism. In the U.S., *B. microti* is transmitted by the bite of female deer ticks. These ticks do not occur in California. It is unknown what kind of tick carries the WA1-type *Babesia*. Rarely, people can get babesiosis when they are given blood taken from people infected with the *Babesia* parasite.

How are *Babesia* parasites maintained in nature?

The white-footed mouse is the most important animal in maintaining *B. microti* in nature. *Babesia microti* has also been detected in the meadow vole, the eastern chipmunk, the Norway rat, the cottontail rabbit, and the short-tailed shrew. The animal reservoir for the WA-1 type *Babesia* is unknown.

What are the symptoms of babesiosis?

Symptoms of babesiosis vary. Most people infected with *Babesia* never feel ill. Severe and fatal cases usually occur in patients who have a weakened immune system, in older individuals, or those without a spleen. Patients have flu-like symptoms such as fatigue, fever, sweats, and muscle aches, typically within one to four weeks following a tick bite. Symptoms of nausea, vomiting, headache, shaking chills, and bloody urine, can also occur.

How is babesiosis diagnosed?

Babesia infects red blood cells. As such, a decrease of red blood cells may be detected in severely affected patients. A reduction of clotting cells (platelets) is also typical in severe babesiosis. *Babesia* organisms can sometimes be observed in red blood cells under a microscope. Specific blood tests for babesiosis can also help a physician make a diagnosis.

How is babesiosis treated?

Drugs used to treat babesiosis are similar to those used to treat malaria. Patients who have a significant reduction in red blood cells may need a blood transfusion.

How do I keep from getting babesiosis?

The best way to keep from getting babesiosis, or any other disease from ticks, is to avoid areas where ticks are found. Stay on trails away from tall grasses where ticks may occur. Wear light-colored long pants and long-sleeved shirts when outside. Apply tick repellents to your clothes and skin. Most importantly, if you have been in an area where ticks may occur, thoroughly check your body immediately after returning indoors and promptly remove any ticks you find.

Where can I find more information on babesiosis?

The Centers for Disease Control and Prevention has information available at their website <http://www.dpd.cdc.gov/dpdx/HTML/Babesiosis.htm>.